

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
NORFOLK DIVISION

TIFFANY SNIDER-JEFFERSON,

Plaintiff,

v.

Civil Action No. 2:15cv406

WAL-MART STORES EAST, LP
T/A WAL-MART, INC. AND/OR
WALMART

AND

AMIGO MOBILITY INTERNATIONAL, INC.
T/A AMIGO MOBILITY AND/OR
AMIGO,

Defendants.

**PLAINTIFF'S BRIEF IN OPPOSITION TO AMIGO'S MOTION FOR SUMMARY
JUDGMENT AND MOTION TO EXCLUDE**

NOW COMES Tiffany Snider-Jefferson, by counsel, and in opposition to Defendant Amigo Mobility International's Motion to Exclude the testimony of Plaintiff's expert states as follows:

BACKGROUND

Defendant Amigo Mobility International filed a Motion to Exclude Plaintiff's expert testimony and a Motion for Summary Judgment. Amigo asks the Court to grant its Motion for Summary Judgment because the Plaintiff cannot establish a prima facie case of defective product design under Virginia law either because Plaintiff has no admissible expert testimony or because her expert testimony, together with other evidence, fails to establish a prima facie case as a

matter of law. The Court scheduled a hearing for August 12, 2016. Given the significant overlap between Amigo's Motions and in the interest of judicial economy, the Plaintiff has elected to file a single memorandum of law opposing both Motions.

Plaintiff has scheduled a deposition of one of Amigo's experts.

EXHIBITS SUPPORTING THIS BRIEF

- A. Portions of Sebastian Bawab, PhD's deposition transcript;
- B. Portions of Tiffany Snider-Jefferson's deposition transcript;
- C. Dr. Sebastian Bawab's report dated May 27, 2016;
- D. Charles R. Manning, III, M.S., P.E. report dated June 30, 2016;
- E. Portions of Nikicha T. Perry's deposition transcript
- F. Affidavit of Dr. Sebastian Bawab; and
- G. UL Standards Sales Site for Sharp Edge Tester.

FACTS

The Incident

The incident occurred while the Plaintiff was leaving a Wal-Mart store with a friend. Wal-Mart's surveillance video demonstrates that an unknown individual operating an Amigo Value Shopper (hereafter "the cart") approached the Plaintiff from the Plaintiff's right side and began swerving to the right. The video demonstrates that the individual driving the cart continued swerving around from the Plaintiff's right side to the Plaintiff's rear. As the cart turned to the right, its leading right edge struck Plaintiff's outstretched left leg lacerating the back of her ankle.

The relevant portion of the cart is angled upward at about ten degrees and the diameter of the front wheel places it inches from the ground. The front edge presents with sharp metal that

Plaintiff's expert, Dr. Bawab, describes as similar to the back of a butcher knife. *Bawab Dep.* at 124.

Amigo mischaracterizes the sequence of events leading to Plaintiff's injury. During the Plaintiff's deposition, she explicitly rejected defense counsel's characterization of the incident as involving the "side edge of the cart" and instead described the "little curve" on the right side of the front edge. See, Snider-Jefferson Dep. at 129; Exhibit 6 TSJ Dep.; Perry Depo. at 30-32. Wal-Mart's surveillance footage is low quality with several seconds between frames but it clearly does not show the "right rear side" of the cart deck striking Plaintiff's leg as Amigo asserts. See, Amigo Mem. Supp. Mot. Ex at 3.; See also, Exhibit A.

Dr. Bawab's Background and Qualifications

The Plaintiff designated Dr. Sebastian Bawab, Chairman of Old Dominion University's Mechanical and Aerospace Engineering departments. Some of Dr. Bawab's design achievements include a surgical device for installing chest spacers in small children, an advanced weapons elevator for the United States Navy's latest class of air craft carrier, a self propelled peanut combine for John Deer, Inc., a friendly mobile barrier that prevents motorist traveling 50 or more mph from crossing railroad tracks while mitigating injury to vehicle occupants, a boom assembly for an aerialscope fire truck, a three hundred ton press, and an oyster harvesting machine for the State of Virginia. *Bawab Dep.* at 116-120; *Bawab Circulum Vitae*. Some of Dr. Bawab's consulting experience includes fixing glass failure on solar panels, modeling muscle fatigue in Navy sailors during long small boat missions, strengthening a pressure vessel used on a Magnetic Levitation Train, and improving AMF Bowling's pin recovery system. *Id.*

Dr. Bawab is also an accomplished educator. He teaches 200 – 700 level classes, including but not limited to Mechanical Engineering Design II, Computer Aided Design of

Mechanical Systems, Advanced Design, and Engineering Software & Finite Element Analysis.

Dr. Bawab has been responsible for capstone projects in his department since 1992. For example, he led a team that designed, analyzed, and fabricated an SAE formula Baja vehicle. His students have competed on the ASME regional and national levels. All of Dr. Bawab's capstone projects have significant safety requirements. Bawab Rebuttal at 2.

Amigo also mischaracterizes Dr. Bawab's background and qualifications. Amigo asserts that Dr. Bawab "has a background in modeling and simulations." Amigo Mem. Supp. Mot. Ex at 3. However, even a cursory look at Dr. Bawab's Curriculum Vitae and experience reveals that his background goes beyond "modeling and simulation" to include bioengineering, kinematics and dynamics, stress analysis and product failure, mechanical engineering design, rapid prototyping, and non-destructive testing. Bawab *Curriculum Vitae*.

Amigo also points out that Dr. Bawab is not a licensed engineer in any jurisdiction despite the fact that Va. Code § 54.1-406 only requires licensure for an engineer whose practice "involves proposed or existing improvements to real property." Amigo Mem. at 5.

Dr. Bawab's Opinion

Dr. Bawab reviewed Amigo's technical drawings and produced an electronic model of the Value Shopper making very limited assumptions, including an assumed battery weight. He then inspected an exemplar cart. Notably, the site inspection revealed that his computer generated model, created using Amigo's specifications and well established and scientifically accepted material characteristics, varied with the weight of the exemplar cart by "a few ounces." Bawab Dep. at 39. He attributes the difference to the weight of wires and bolts. *Id.*

He then created the most conservative impact model possible by depicting the impact between the front edge of the cart, built and performing to Amigo's exact specifications (Bawab

Dep. at 38-40) and a computer generated female leg created using the Plaintiff's physical characteristics including height and weight (Bawab Dep. at 82).

Dr. Bawab testified during his deposition that Amigo's design violates basic principles of design engineering in that it merely satisfies baseline standards without anticipating hazards beyond those standards. Bawab Dep. at 124. He compared Amigo's design to that of a car with a sharp hood ornament that would impale a person upon impact. Bawab Dep. at 123. He further testified that the cart was "not safe" for its intended use and demonstrated that in fact the cart was three times more likely to cause serious injury to pedestrians upon collision than a design that includes a rubber bumper. *See*, Bawab Dep. at 123-125.

Dr. Bawab testified that the fact that the cart stuck the plaintiff at an oblique angle, as opposed to a true rear angle, does not affect his analysis because he chose the most conservative model and a slicing action would be more severe than a compression impact. Bawab Dep. at 126. He also testified that error rate is irrelevant to this kind of analysis. Bawab Dep. at 60-65, 94,109-111. His assertions regarding the angle of impact and error rate remain uncontroverted.

Amigo's Expert Report

Amigo designated Charles Manning III, M.S., P.E. of Accident Reconstruction Analysis, PLLC. Mr. Manning concludes, after viewing Wal-Mart's surveillance footage, that the cart's "transition section," the section of the cart deck on the right rear side where the deck widens to accommodate the rear wheel, instead of the front right edge struck Plaintiff's left ankle - an interpretation not clearly depicted in the video and contrary to eye-witness testimony. *See*, Snider-Jefferson depo. at 129; Perry dep. at 30-32; Ex 6 TSJ depo. He then argues that Dr. Bawab's simulation does not address the facts of the incident but fails to explain exactly how his scenario would change Dr. Bawab's analysis. Manning Ex. Rep. at 3.

Mr. Manning states that Underwriter's Laboratory (UL) Standard 3456 and the corresponding testing protocol, UL Standard 1439, are the only standards that apply to the Amigo Value Shopper. Manning Ex. Rep. at 5.

UL 3456 section 26.2 titled "Sharp Edges" states in relevant part: "An enclosure, frame, guard, handle, or the like shall be smooth and free from sharp edges that are capable of injury to persons during intended maintenance and use." Manning Ex. Rep. at 3-4. UL 1439 involves a hand held wand the tip of which is designed to simulate the skin thickness of a human finger. Exhibit G. In order to test an edge, one moves the wand along a small portion of the edge. If the edge cuts the material on the tip of the wand the edge fails UL 3456 and *visa versa*. Mr. Manning states that all Value Shoppers at the Wal-Mart store in question passed UL 1439's sharp edge test.

Mr. Manning admits that "[b]ecause the cart was turning, the lateral contact forces created on the back of Ms. Snider-Jefferson Achilles would be far greater than normal inadvertent contact forces anticipated by the UL 3456 standard that the manufacturer meets."

He never addresses the UL 1439 methodology and why it does not account for the mass of the cart, the speed of travel, and the resulting stress the cart's edge under load would exert on human tissue.

Dr. Manning does not state that the sharp nature of the cart's lower leading edge serves a functional purpose. He does not address the economic feasibility of an inexpensive rubber bumper.

Dr. Bawab's Rebuttal Report

After discussing his qualifications, Dr. Bawab addresses Mr. Manning's interpretation of the surveillance footage. He argues that there are several seconds between frames and one must

account for human reaction time making the footage difficult to interpret. However, the video is susceptible to the interpretation that the front right edge of the cart struck the Plaintiff's leg, and eye-witness testimony confirms that interpretation.

He then addresses, UL Standards 3456 and 1439. He states that these standards are often created by industry participants, are self-serving, and fail to anticipate likely contingencies. He goes on to argue that UL 3456 and 1439 do not apply because they were created after the cart was designed and are inadequate for a vehicle designed for use in a pedestrian environment.

Mr. Manning admits that the forces applied to the Plaintiff's leg were far greater than the forces UL 3456 anticipates. Dr. Bawab argues UL 1439, consistent with UL 3456's limited scope, tests a resting cart applying little force to the edge. That test is appropriate to protect pedestrians who happen to gently brush the edge of a resting cart. However, the cart weighs more than three hundred pounds and is designed to move up to three miles per hour in a pedestrian environment. Sound design principles demand a standard for sharpness that would not cause personal injury while the cart is in motion serving its primary purpose – anything less is absurd. Bawab Rebuttal.

ARGUMENT

Daubert v. Merrell Dow Pharmaceuticals, Inc. interpreted FRE 702 as requiring courts to evaluate the admissibility of expert testimony on the basis of reliability and relevance. 509 U.S. 579 (1993). The Rule 702 inquiry is flexible and the Court “need not determine that the proffered expert testimony is irrefutable or certainly correct” because “[a]s with all other admissible evidence, expert testimony is subject to testing by '[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof.’” *Id.* at 596. Some factors courts consider in assessing admissibility include (1) whether a theory can be or has been tested;

(2) whether the theory has been subjected to peer review and publication; (3) whether the theory has a high known or potential rate of error and whether there are standards controlling its operation; and (4) whether the theory or technique enjoys general acceptance within the scientific community. *Id.* at 593.

A. Dr. Bawab is well qualified to testify regarding the design of the cart.

Dr. Bawab is qualified to testify regarding the design of Amigo's Value Shopper despite the fact that he has never designed a similar vehicle because an expert is qualified to testify regarding the design of a specific machine despite that fact that he or she has never designed the specific machine if the expert has sufficient expertise in the relevant field. *See, Belk, Inc. v. Meyer Corp. U.S.*, 679 F.3d 146 (4th Cir. 2012)(holding that an expert was properly qualified to testify as an expert in marketing, consumer behavior and evaluative studies at a trial on trade dress infringement and unfair trade practices claims, even though the expert had not previously conducted trade dress or trademark surveys because the expert had general marketing expertise); *See also, Stagl v. Delta Air Lines, Inc.*, 117 F.3d 76, 81 (2nd Cir.1997) ("In determining whether an expert is sufficiently knowledgeable to be admitted to testify, one of the factors that the district court ought to consider is whether other experts exist who are more specifically qualified and who are nonetheless not in the employ of the company or industry whose practices are being challenged..."). As discussed, Dr. Bawab has extensive design experience with far more sophisticated devices and vehicles than the Amigo Value Shopper. This Court must consider Dr. Bawab's full range of experience and training and find that he is well qualified to testify in this case. *See, Id.*

Dr. Bawab is also qualified to provide expert testimony in this case because, as discussed, he teaches several rigorous high-level courses on design engineering including a PhD course.

See, Bawab Dep. at 121-22; Bawab C.V. Dr. Bawab trains engineers like those that Amigo has designated in this case. Amigo's argument that Dr. Bawab is not qualified to testify regarding the design of the cart because "he teaches *a generic design course*" is completely disingenuous.

[emphasis added] Amigo Mem. Supp. Mot. Ex. at 8.

Amigo's attack on Dr. Bawab's qualifications is not appropriate under Rule 702 and should be left to cross examination before a jury. See, Id. at 162-63.

B. Dr. Bawab's expected testimony is relevant and fits the case.

Virginia products liability law requires that Plaintiffs show (1) that a product has an unreasonable design defect, (2) the defect existed when the goods left Defendants' hands. *Logan v. Montgomery Ward & Co.*, 216 Va. 425, 428, 219 S.E.2d 685, 687 (1975). Virginia courts look to industry, government safety standards, and reasonable expectations of consumers to help determine whether a defect is unreasonable. *Sexton v. Bell Helmets, Inc.* 926 F.2d 33, 337 (4th Cir. 1991). However, where no government or industry standards apply, plaintiffs may offer proof by reference to general engineering principles and industry standards for similar products. *Hambrick ex. rel. Hambrick v. Ken-Br Mfg. Co.*, 422 F.Supp.2d 627 (W.D. Va., 2002); *Blevins v. New Holand North America, Inc.*, 128 F. Supp.2d 952, 957 (W.D. Va. 2001); *Ford Motor Co. v. Bartholomew*, 224 Va. 421, 297 S.E.2d 675, 679 (1982).

Amigo argues that Dr. Bawab's testimony is irrelevant and does not fit the case because Dr. Bawab does not opine that the cart's defect is unreasonable relative to industry standards. To the contrary, Dr. Bawab opines that UL 3456 does not apply to the defect that is subject of this case. *Bawab Rebuttal*. As Mr. Manning admits "the lateral contact forces created on the back of

Ms. Snider-Jefferson's Achilles would be far greater than normal inadvertent contact forces anticipated by the UL 3456 standard." UL 3456 does not apply to a vehicle specifically designed to operate in dynamic mode.

Furthermore, UL 3456 was developed after the Value Shopper was designed, and an industry cannot retroactively approve a design defect.¹ See, *Mears v. General Motors Corp.*, 896 F.Supp. 548, 551 (E.D. Va. 1995) ("a product is only defective when measured against the standard at the time of sale..."); See also, *Stagl v. Delta Air Lines, Inc.*, 117 F.3d 76, 81 (2nd Cir.1997) (applying the *Daubert* standard and discussing the principle that courts should be cautious about allowing industry experts to set their own standards) citing *The T.J. Hooper*, 60 F.2d 737, 740 (2d Cir. 1932) (Learned Hand, J.). Notably, UL 1439, first published in 1978, states that "an edge of an enclosure, frame, guard, knob, or handle or the like of an appliance or equipment shall be smooth *and rounded* so as not to cause a cut type injury when contacted during normal use or user maintenance." [emphasis added]. UL 1439 § 4. UL 3456's language mirrors that of UL 1439's almost exactly but conveniently omits the phrase "and rounded.."

If UL 3456 does apply, it prohibits edges sharp enough to cause personal injury. However, computer modeling demonstrates that the front edge is practically certain to lacerate human flesh with contact under load. *Bawab Rebuttal Report*. Dr. Bawab also points out that the sharp edge serves no critical design function – an assertion that remains undisputed.

¹ Note that Mr. Manning states, "UL 3456 did not exist until 2013" but "the [Value Shopper's] design, fabrication, and assembly processes were identical before and after the adoption of the standard." *Manning Report* at 4

Furthermore, UL 1439 is irrelevant to the incident in question. UL 1439 tests for compliance with UL 3456 by testing a cart at rest using minimal pressure on the contact surface. However, the cart weighs more than 300 pounds and moves up to 2.3 miles per hour.

Compliance with 3456, as and to the extent it applies, cannot be determined by static testing.

Bawab Rebuttal.

C. Summary Judgment is inappropriate at this time.

Disputed Facts

1. Amigo asserts that the accident occurred when the right rear or “transitional” part of the cart deck struck the Plaintiff. Plaintiff disputes Amigo’s characterization arguing that it was the right, front edge. *See*, Snider-Jefferson depo. at 129; Perry Depo. at 30-31.
2. Amigo asserts that UL 3456 applies to the design of Value Shopper. Plaintiff’s expert disagrees that UL 3456 applies.
3. If UL 3456 applies at all, the parties disagree on whether it applies to the Value Shopper in dynamic mode.
4. The parties disagree on whether UL 1439 is a relevant testing standard.

Standard of Review

Summary Judgment is only appropriate where it is perfectly clear that there is no dispute as to any material fact and the movant is entitled to judgment as a matter of law. *Pheonix Savings and Loan, Inc. v. Aetna Casualty and Surety Co.*, 381 F. 2d 245, 249 (4th Cir., 1967). The burden is on the moving party to establish that there is no genuine issue of fact, and all inferences are drawn in favor of the non-moving party. *Id.*

Argument

Amigo's Motion for Summary Judgment is based primarily on the argument that the Court should exclude Plaintiff's expert, Dr. Sebastian Bawab, and thereafter grant Summary Judgment because the Plaintiff cannot present expert testimony. As discussed more fully above, the Court should not exclude Dr. Bawab's testimony.

Amigo's remaining argument is that even if the Court admits Dr. Bawab's testimony, it fails to establish that the front edge of the cart was negligently designed as a matter of law. As discussed more fully above, Dr. Bawab has testified that the design of the cart is unsafe, that UL 3456 does not apply and even if it does the cart's design breaches that standard, and finally that UL 1439 is not relevant to assessing whether a vehicle in dynamic mode complies with UL 3456's prohibition against sharp edges that cause personal injury.

Amigo cites *Alevromagiros v. Hechinger Co.* in support of its contention that Dr. Bawab's testimony lacks any discussion of industry standards and therefore the Plaintiff cannot prove that the cart is negligently designed as a matter of law. 993 F.2d. 417 (4th Cir. 1993). After reviewing Amigo's Rule 26 expert disclosure, Dr. Bawab has opined that UL 3456 does not apply and where there is no industry standard Plaintiff's may prove negligent design by reference to general engineering principles. *See, Hambrick ex. rel. Hambrick v. Ken-Br Mfg. Co.*, 422 F.Supp.2d 627 (W.D. Va., 2002); *Blevins v. New Holand North America, Inc.*, 128 F. Supp.2d 952, 957 (W.D. Va. 2001); *Ford Motor Co. v. Bartholomew*, 224 Va. 421, 297 S.E.2d 675, 679 (1982).

Dr. Bawab has further opined that even if UL 3456 applies, the cart's design does not comply with the prohibition against sharp edges. Therefore, Dr. Bawab's rebuttal report creates material issue of fact appropriate for resolution by the trier of fact.

Finally, discovery has not concluded in this case. At the time this memorandum of law was filed Plaintiff has scheduled but not completed depositions of one of Defendant's experts and at least one other fact witness that was recently disclosed.

CONCLUSION

For the foregoing reasons Plaintiff request that the Court DENY Amigo Mobility's Motion to Exclude and Motion for Summary Judgment.

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CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of July, 2016, a true copy of the foregoing Plaintiff's Brief in Opposition to Motion for Summary Judgment and Motion to Exclude was e-filed:

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